

IN THE CLAIMS

1. (Previously Presented) A dry etching apparatus for treating a body comprising:

a chamber;

a sample holder in said chamber designated to hold a wafer with a predetermined diameter;

means for introducing gas into said chamber;

means for exhausting said gas in said chamber;

a power supply of Ultra High Frequency;

an electromagnetic wave radiation antenna coupled to said power supply and installed in an atmosphere; and

a separation plate used as dielectric between said antenna and the inside of said chamber, wherein

said antenna is a plate antenna including a discoidal electrode to which Ultra High Frequency is applied, an earth electrode and a dielectric plate provided between the discoidal electrode and the earth electrode,

wherein a diameter of said discoidal electrode is not less than that of the wafer.

2. (Previously Presented) A dry etching apparatus according to claim 1, wherein said separation plate is quartz disk.

3. (Canceled)

4. (Original) A dry etching apparatus according to claim 1,
wherein said means for introducing the gas has a shower plate, and

a distance between said shower plate and said holder is less than 100mm.

5. (Canceled)

6. (Original) A dry etching apparatus according to claim 1,

wherein said power supplies Ultra High Frequency of a frequency not less than 300MHz and not more than 1GHz.

7. (Canceled)

8. (Previously Presented) A dry etching apparatus according to claim 1,

wherein said separation plate separates said chamber and a second area where the pressure is higher than the pressure in the chamber,

said antenna is a microstrip antenna formed in said second area;

a coil outside of said chamber; and
wherein the plate antenna resonates TMO1 mode.

9. (Presently Presented) A dry etching apparatus according to claim 37,

wherein said separation plate separates said chamber and a second area where the pressure is higher than the pressure in said chamber,

said antenna is a microstrip antenna formed in said second area;

a coil outside of said chamber; and
wherein a power supply provides Ultra High Frequency power to said plate antenna in a form of a cone.

10. - 33. (Canceled)

34. (Previously Amended) A dry etching apparatus for treating a semiconductor wafer comprising:

a chamber;

a holder in said chamber designated to receive a semiconductor wafer of a predetermined diameter;

means for exhausting said gas in said chamber;

means for introducing gas into said chamber;

a power supply of Ultra High Frequency;

a plate antenna for radiating an electromagnetic wave, coupled to said power supply and installed in an atmosphere, said microstrip antenna comprising a discoidal electrode; and

a separation plate used as a dielectric between said antenna and the inside of said chamber;

wherein said plate antennae is including a discoidal electrode to which Ultra High Frequency is applied, an earth electrode and a dielectric plate provided between the discoidal electrode and the earth electrode,

wherein a diameter of said discoidal electrode is not less than that of the wafer.

35. (Previously Presented) A dry etching apparatus according to claim 34, wherein said separation plate is a quartz disk.

36. (Previously Presented) A dry etching apparatus according to claim 34, wherein said power supply supplies power of an Ultra High Frequency band having a frequency not less than 300MHz and not more than 1GHz.

37. (Previously Presented) A dry etching apparatus according to claim 1, further comprising:

a conical-shaped feed division to provide Ultra High Frequency power to said plate antenna, wherein

said conical-shaped feed division is placed on the discoidal electrode, and

said feed division is placed in the atmosphere.

38. (Previously Presented) A dry etching apparatus according to claim 34, further comprising:

a conical-shaped feed division to provide Ultra High Frequency power to said plate antenna, wherein

said conical-shaped feed division is placed on the discoidal electrode, and

said feed division is placed in the atmosphere.

39. (Currently Amended) A dry etching apparatus ~~for treating a semiconductor wafer~~ according to claim 1, said means for introducing gas further comprising:

a gas shower plate which its diameter is less than or equal to three fourths of the diameter of the wafer.

40. (Currently Amended) A dry etching apparatus ~~for treating a semiconductor wafer~~ according to claim 34, said means for introducing gas further comprising:

a gas shower plate which its diameter is less than or equal to three fourths of diameter of the wafer.